Brit. J. vener. Dis. (1969), **45**, 173.

ABSTRACTS

This section of the JOURNAL *is published in collaboration with the two abstracting Journals,* ABSTRACTS OF WORLD MEDICINE *and* OPHTHALMIC LITERATURE, *published by the British Medical Association. The abstracts are divided into the following sections:*

Syphilis (Clinical, Therapy, Serology, Biological False Positive Phenomenon, Pathology, Experimental).
Gonorrhoea.
Non-Gonococcal Urethritis and Allied Conditions.
Reiter's Disease and Allied Conditions.
Antibiotics and Chemotherapy.
Public Health and Social Aspects.
Miscellaneous.

After each subsection of abstracts follows a list of articles that have been noted but not abstracted.

SYPHILIS (Clinical)

Has the Clinical Picture of Tabes Dorsalis Been Changed by Treatment? (Hat sich das Krankheitsbild der Tabes dorsalis therapiebedingt gewandelt?) LEY, H., and KRIDDE, O. E. (1968). *Münch med. Wschr.*, **110**, 1924. Bibl.

The authors describe the symptoms, signs, and results of investigations in 47 cases of neurosyphilis seen at the Second University Medical Clinic and other clinics in Munich during the past 17 years. There were 37 cases of tabes dorsalis, eight of meningovascular neurosyphilis, and two of acute syphilitic meningitis.

The incidence of the various symptoms and signs occurring in these patients are compared with those in previous surveys reported in the German literature and the conclusion is reached that tabes dorsalis produces fewer symptoms and milder manifestations than it did 20–30 years ago. The results of the serological tests, which included two or three agglutination reactions and several complement fixation reactions as well as the TPI test, are evaluated in conjunction with the results of the tests on the CSF. Although these tests were of great diagnostic value, they were not always conclusive, and the authors restate the well-established fact that the diagnosis of neurosyphilis depends upon a detailed case history and careful evaluation of the physical signs as well as the results of the special tests.

The authors review the German literature on the treatment of neurosyphilis. [Their recommendations differ from British practice in the preliminary use of bismuth, the mistaken idea that small initial doses of penicillin will prevent a Herxheimer reaction, and the continued use of fever therapy and potassium iodide in the management of neurosyphilis. They do, however, point out that in the future the treatment of choice may be with steroids and penicillin.]

Finally, it is concluded that there has been an increase in the number of abortive cases or "formes frustes" of the disease. These are attributed to the various types of antisyphilitic therapy given during the past few decades, and their recognition is considered important because of the beneficial effects of modern treatment.

R. D. Catterall

Considerations on the Incidence of Ocular Syphilis in the Clinic of Ophthalmology, Iasi. [In Rumanian.] VANCEA, P. P., TESCHIEVICI, M., COLEV, GH., LAUR, L., and CRISTEA, L. (1968). *Oftalmologia (Buc.)*, **12**, 27, 1 fig., 6 refs.

The morbidity of ocular syphilis is analysed in its dynamics as from the year 1931 onward. An important reduction of the ocular lesions of a syphilitic nature has been found during the last 20 years. *P. Vancea*

Neurosyphilitic Psychoses Today: a Survey of 91 Cases. DEWHURST, K. (1969). *Brit. J. Psychiat.*, **115**, 31. 1 fig., 25 refs.

This paper from Littlemore Hospital, Oxford, is based on an examination of the clinical notes of the 91 patients (62 male, 29 female) admitted to six mental hospitals in central and southern England between 1950 and 1965 with neurosyphilitic psychosis. A cross-check of the laboratory registers of patients with positive CSF findings for neurosyphilis was carried out at three hospitals and suggested that the admissions represented the true incidence of the disease in the areas served by these hospitals. The mean annual incidence was calculated to be about 1 in 200,000 in two areas and 1 in 605,000 in the third. The annual admission rate was highest in 1957 and 1958, when nineteen of the 91 patients were admitted; this was approximately 11 years after the peak incidence of primary syphilis in England and Wales. Over half the patients were married and 20 per cent. were widowed, separated, or divorced; 94·5 per cent. were British. The mean age on admission was 51·3 years (range 28–75). Of the men 93 per cent. were labourers or tradespeople and 66 per cent. had served in the armed forces.

The commonest early symptoms were depression,

headaches, forgetfulness, insomnia, irritability, apathy, and epilepsy. Over two-thirds of the admissions took place within 18 months of their onset. In half the cases a specific incident precipitated admission, whereas the onset was insidious in the remainder. The commonest initial diagnosis was depression (30·8 per cent.) followed by dementia (14·3 per cent.). The correct diagnosis was made at the onset of the illness in only 26·4 per cent. Delusions of grandeur, supposedly characteristic of cerebral syphilis, were present in only 10·9 per cent. There were no abnormal neurological signs in 8·7 per cent., while 51·6 per cent. had reflex abnormalities, 24·1 per cent. slurred speech, 21·9 per cent. tremors, and 19·7 per cent. ataxia, 58·2 per cent. abnormal pupils, and 18·7 per cent. fits.

Eighteen patients (19·7 per cent.) died in hospital, 27 (29·7 per cent.) became chronic mental hospital patients, two were transferred before treatment, and 44 (48·3 per cent.) were discharged after treatment. Combined penicillin and fever therapy was given to 31 patients and penicillin alone to 58 of those treated; 42 per cent. [not 14·6 per cent. as stated in the text] of the former died or remained in hospital compared with 55·1 per cent. of the latter; 57·8 per cent. of the nineteen patients who received ECT in addition to other therapy died or remained in hospital compared with 49 per cent. of those who did not. No firm conclusions can be drawn from these figures as the groups were not strictly comparable. Of the 89 patients who received penicillin only one had a febrile reaction, which did not prevent further uneventful treatment.

There is a brief discussion of the socioeconomic and clinical aspects of neurosyphilis. It is suggested that ECT should be given with caution unless the serology is negative. *Louis Herzberg*

A New Concept of the Origin of Syphilis in Europe. (Une conception nouvelle sur l'origine de la syphilis en Europe). BONEFF, A. (1968). *Ann. Derm. Syph. (Paris)*, **95,** 529. 8 refs.

Yaws. [In Hebrew.] (English summary p. 228). DOLEV, E., PADEH, B., and YAKAR, D. (1969). *Harefuah,* **76,** 197.

Primary Syphilis of the Anorectal Region. SAMENIUS, B. (1968). *Dis. Colon Rect.,* **11,** 462. 6 figs, 18 refs.

Current Problems in Syphilis. [In Hungarian.] ISTVÁN, K. (1969). *Orv. Hetil.,* **110,** 225. 2 figs.

Syphilis of Nose and Paranasal Sinus. HI YOUNG LEE (1968). *Ohio St. med. J.,* **64,** 1264. 5 figs, 9 refs.

Some Aspects of Syphilis Today. (Quelques aspects actuels de la syphilis). DEGOS, M. R. (1968). *Proph. sanit. morale,* **40,** 207.

Syphilitic Coronary Ostial Sclerosis. FRATER R. W. M., and JORDAN, A. (1968). *Ann. thorac. Surg.,* **6,** 463.

Congenital Syphilis in an Infant of a Sero-negative Mother. HALLOCK, J., and TUNNESSEN, W. W. (1968). *Obstet. and Gynec.,* **32,** 336. 3 figs, 4 refs.

Angiographic Demonstration of Coronary Ostial Stenosis. Report of a Case probably due to Syphilis. MACLEOD, C. A., KAMEN, A. R., BEFELER, B., BOGATY, G. W., and SCHWARTZ, H. (1968). *Amer. J. Cardiol.,* **22,** 122.

Tabetic Arthropathy of Both Shoulders. (À propos d'un cas d'arthropathie tabétique des deux epaules.) SÈZE, S. DE, GUÉRIN, C., SOLNICA, J., and COURBON, J. (1968). *Rev. Rhum.,* **35,** 551.

SYPHILIS (Therapy)

Some Aspects of Preventive Treatment of Syphilis. [In Russian.] SHEINLUKHT, L. A., POLYAKIVA, E. P., and TIKHONOVA, A.YA (1967). *Vestn. Derm. Vener.* **41,** No. 9, p. 62. 33 refs.

From the Chair of Skin Diseases of the Medical Paediatric Institute in Leningrad and the City and the Provincial Dermato-Venereological Dispensaries the methods and results are reported of preventive treatment of contacts of patients who had been admitted to the Dispensaries with early infectious syphilis. Of a total of 338 (103 male and 235 female) contacts, 239 had been exposed sexually and 99 (*i.e.* family members) asexually; 46 were aged 10 years or less, 19 were between 11 and 18, and 273 over 18 years. In the majority (216) treatment was started within 20 days of exposure, but 52 were treated between 21 and 30 days, and 70 more than 30 days after exposure. None showed any clinical or serological evidence of syphilis.

At least 6 mega units penicillin were given by intramuscular injection for a course of treatment, 278 contacts receiving one course, three, two, and 57 three courses; 148 were given benzylpenicillin 50,000 units 3-hourly, 75 ekmonovocillin (aqueous novocaine penicillin) 600,000 units daily, 89 bicillin (benzathine penicillin) 1·2 mega units every 4 days, and 26 benzylpenicillin and bicillin. After completing treatment, 223 were kept under regular clinical and serological observation for one year, 56 for 2 years or more, and 59 treated within the last year continue to attend; not a single case of syphilis has developed. Seven women who had received preventive treatment were later delivered of healthy children, but it is stressed that an infant born to a mother who has received such treatment requires thorough clinical and serological investigation, even though the mother has been discharged from surveillance. In recent years the authors have arrived at the conclusion that, in cases in which the suspected time of incubating presumed syphilis exceeds 3 weeks, 15 mega units penicillin in an uninterrupted course are as effective as three courses of 6 mega units given at fortnightly intervals (which is the recommended treatment for sero-negative primary syphilis in the USSR). *L. Z. Oller*

Seventy Cases of Syphilis of Various Types Resistant to Penicillin. (A propósito de 70 casos de sífilis, de várias formas, resistentes à penicilinoterapia.) VIEGAS, L. C. (1968). *J. Méd. (Pôrto)*, **67**, 335, 26. 11 refs.

SYPHILIS (Serology)

Atypical Serology in Neurosyphilis. DEWHURST, K. (1968). *J. Neurol. Neurosurg. Psychiat.*, **31**, 496. 18 refs.

The author, writing from the Littlemore Hospital, Oxford, has reviewed the histories of 91 patients with neurosyphilis requiring admission to mental hospitals between 1950 and 1965. Full serological tests on serum and CSF had been performed on 86 patients: in 73 instances both tests were positive; in ten the serum Wassermann or Kahn test was positive but tests on the CSF were negative; and in three the CSF was grossly abnormal but the blood tests were negative. Several of the patients with positive serum and negative CSF tests had already been treated, but too late to influence the course of the disease. Two of these patients, whose case histories are quoted, continued to deteriorate despite a normal CSF. The negative blood tests in the three patients previously mentioned had led to a considerable delay in arriving at the correct diagnosis. Two of these patients died and one has remained in a mental hospital.

The author stresses the importance of clinical judgment and the danger of too great reliance on laboratory findings in isolation; he considers that if there is a clinical possibility of neurosyphilis the CSF must be examined even though tests on the blood may be negative.

The use of the Reiter protein complement fixation test as an adjunct to tests for reagin is suggested as it is more sensitive than the routine Kahn and Wassermann tests. [The use of the more sensitive and specific TPI or FTA–ABS tests in these difficult cases would be even more rewarding.] *A. E. Wilkinson*

Quantitative FTA Test carried out with Fractionated Fluorescent Antigammaglobulins. I. Primary and Secondary Syphilis. (FTA test quantitativo eseguito mediante anti-gamma-globuline frazionate fluorescenti. I—Lue primo-secondaria.) SARTORIS, S., STRANI, G. F., PIPPIONE, M., and LEIGHEB, G. (1968). *Minerva derm.*, **43**, 219. 38 refs.

To determine which of the serum immunoglobulin fractions are involved in the immunofluorescence test for syphilis sera from sixteen patients with dark-ground-positive primary syphilis and from ten with secondary syphilis were investigated at the Institute of Clinical Dermatology of the University of Turin. Quantitative fluorescent treponemal antibody tests were performed with an antihuman γ-globulin conjugate and with specific anti-IgG, -IgM, and -IgA conjugates.

The total antibody titre ranged from 150 to 4,000 in primary syphilis and from 1,350 to 4,000 in secondary syphilis. IgG titres were the highest of the three immunoglobulins, varying between 150 and 2,500 in the primary stage and between 450 and 8,000 in the secondary stage. IgM was present in all save one of the primary sera at titres usually between 150 and 450 and in all the secondary sera in the same range. IgA gave the lowest titres, which did not exceed 300; in nine of the primary sera and two of the secondary sera no IgA was detected or the titre was less than 150. Tests on sera from twenty control patients who did not have syphilis gave negative results. *A. E. Wilkinson*

Studies on Reagin Formation in Rabbits Immunized with *T. pallidum* and Reiter Treponemes. TRINGALI, G., ZAFFIRO, P., and BUTTITTA, C. (1968). *Riv. Ist. sieroter. ital.*, **43**, 144.

Rabbits were immunized by the intravenous injection of washed suspensions of Reiter treponemes and others with the same suspension heated to 100°C. for an hour. Antisera to similarly treated suspensions of the Nichols strain of *Treponema pallidum* were also prepared. Pre-immunization sera (one not tested) gave negative results in VDRL slide tests and in complement-fixation tests with cardiolipin and Reiter protein (RP) antigens.

The rabbits given unheated or heated Reiter treponemes developed complement-fixing antibodies to both cardiolipin and RP antigens. Reactivity with the former, but not with RP antigen, was abolished by treatment of the sera with 2-mercaptoethanol. Only three of the seven animals produced flocculating antibody reactive in the VDRL test.

The four antisera to *T. pallidum*, both heated and unheated, were strongly reactive in the VDRL test and against cardiolipin and RP antigens in complement-fixation tests. In contrast to the anti-Reiter sera, complement-fixation with cardiolipin antigen was not significantly reduced by treatment with 2-mercapto-ethanol; this has also been found with human syphilitic sera.

The authors, working at the Institute of Hygiene, University of Palermo, suggest that there are differences in the reagins produced in response to the Reiter treponeme and *T. pallidum*, and that the reagin antibody found in syphilitic sera may, in fact, be a response to antigens in *T. pallidum*. *A. E. Wilkinson*

Reduction of Non-Specific Background Staining in the Fluorescent Treponemal Antibody-Absorption Test. ROBERTS, M. E., MILLER, J. N., and BINNINGS, G. F. (1968). *J. Bact.*, **96**, 1500.

Non-specific background fluorescence may make the reading of the FTA–ABS test difficult, especially with weakly reactive sera. Studies at the Aerojet-General Corporation, El Monte, California, showed that two types of non-specific staining could be distinguished; a speckled appearance of brightly fluorescing particles, thought to be due to staining of cellular debris from the treponeme suspension, and an overall glow. This latter was shown to be due to staining of β-lipoprotein and albumin in the serum-sorbate mixture applied to the film of fixed treponemes. It (but not the speckled appearance) could be removed by the use of trypsin

during the washing of the slides although excessive amounts of trypsin caused detachment of treponemes from the slides. The procedure recommended is:

(*a*) Fix dried smears of treponemes in 10 per cent. methanol for 10–20 seconds followed by rapid drying.

(*b*) Apply serum-sorbate mixture and incubate at 37°C. in a moist chamber.

(*c*) Rinse in distilled water and soak slides for 10 minutes in a 1 in 30 dilution of 2·5 per cent. trypsin in phosphate buffered saline, pH 7·2. Rinse thoroughly in distilled water, soak in distilled water for one minute, and dry.

(*d*) Apply conjugate and incubate at 37°C.

(*e*) Rinse and soak in distilled water for one minute, dry, and mount. [The anti-human globulin congugate used in these experiments also contained antibody against albumin; this may also have contributed to non-specific background staining.] *A. E. Wilkinson.*

Advantage of a Routine Reiter Protein Complement-fixation Test in the Sero-diagnosis of Syphilis in Pregnancy. MORRIS, C. A. (1968). *J. clin. Path.*, **21**, 731.

Reiter protein complement-fixation (RPCF) tests, a Wassermann reaction with cardiolipin antigen, and VDRL slide tests were performed on 35,912 sera from pregnant women at the Public Health Laboratory, Bristol, over an 18-month period. Sera giving reactive results to one or more of the tests on two separate specimens of serum were sent to a reference laboratory for repetition of the tests and TPI or FTA tests to verify the results.

127 sera (0·3 per cent.) were reactive in one or more of the screening tests; 48 of these results were accepted as being specific because the TPI or FTA tests were positive. Of these 48 sera, the CWR was positive in 27, the VDRL in 34, and the RPCFT in 45; in thirteen sera this last was the only screening test positive, so that these patients, 27 per cent. of the total, would have been missed had reliance been placed on the tests for reagin alone. Of the 79 sera thought to have given non-specific results because the TPI and FTA tests were negative, the RPCFT was positive in 37 (in thirty instances it was the only test positive), the CWR in 35, and the VDRL in nineteen.

Twenty of the 48 women judged to have serological evidence of treponemal disease were immigrants, seventeen of them from the West Indies. The estimated incidence in this immigrant group was 2 per cent. compared with 0·08 per cent. in women born in the United Kingdom.

The addition of the RPCFT to tests for reagin in screening antenatal sera is thought to produce a significant increase in the number of cases identified for only a small increase in time and money.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene*, by permission of the Editor]

A Study of the Heat-Labile Antigen of *Treponema pallidum*. METZGER, M., and PODWINSKA, J. (1968). *Arch. Immunol. Ther. exp. (Warsz.)*, **16**, 888. 7 refs.

Immunofluorescent Detection of *Treponema pallidum*. KELLOGG, D. S., JR., and MOTHERSHED, S. M. (1969). *J. Amer. med. Ass.*, **207**, 938. 18 refs.

Correlation Between Fluorescent Treponemal Antibody Absorption (FTA–ABS) Results and Physician's Diagnoses. LINDELL, S. S., and KOONTZ, F. P. (1968). *J. Iowa St. med. Soc.*, **58**, 1234. 16 refs.

C-Reactive Protein in Various Stages of Syphilis. (Rilievi e considerazioni sul comportamento della proteina C reattiva nei vari stadi dell'infezione leutica.) LUCA, M DE, and ROSSI, A. (1968). *G. ital. Derm.*, **109**, 109. 14 refs.

Antitreponemal Agglutinin in Routine Serological Tests for Syphilis. (Ricerca delle agglutinine antitreponemiche nella sierologia di routine per la lue.) LOMUTO, G. (1968). *G. ital. Derm.*, **109**, 117. 17 refs.

Lymphocyte Stimulation by *Treponema pallidum in vitro*. Fluorescence Serological Examination for Gamma-globulins. (Über eine "in vitro" Lymphocytenstimulation durch *Treponema pallida*. Fluorescenzserologischer Nachweis von Gammaglobulinen.) HEITMANN, H. J. (1968). *Hautarzt*, **19**, 556. 1 fig., 9 refs.

Treponemal and Lipoidal Tests in Old Treated Syphilis. A Clinical Evaluation of 367 Cases with Special Reference to the Fluorescent Treponema Antibody–Absorption (FTA–ABS) Test. [Monograph in English.] LASSUS, A. (1968). *Acta derm. venereol. (Stockh.)*, **48**, Suppl. 60, 7. 1 fig., bibl.

SYPHILIS (B.F.P. Phenomenon)

False-Positive Reactions for Syphilis. Serological Abnormalities in Relatives of Chronic Reactors. TUFFANELLI, D. L. (1968). *Arch. Derm.*, **98**, 606.

199 relatives of 103 patients with false positive reagin tests which had persisted for longer than 6 months were studied at the University of California School of Medicine. The patients were almost all white (93 per cent.); 88 per cent. were women, most being in the 20–49 age group. Many had autoimmune disease of various kinds, lupus erythematosus being the most frequent (24 cases). 26 of the patients were drug addicts; it was not possible to study their relatives. 31 of the patients were apparently healthy.

No clear pattern of disease was found in the relatives. Rheumatoid arthritis was present in thirteen, diabetes in twelve, and malignant disease in nine. Only three had verified biological false positive reagin tests. The results of serological tests on sera from the patients, their relatives and on control families are summarized in the Table. (Tests were not performed on all the sera.)

	Patients	Relatives	Controls
Number	103	199	66
False positive reagin tests (per cent.)	100	1·7	0
Hypergammaglobulinaemia (per cent.)	19·4	16·9	7·6
Antinuclear antibody (per cent.)	16·5	7·5	3·0
L E-cell factor (per cent.)	14·5	0	0
R A factor (latex test) (per cent.)	15·0	14·2	7·6

Quantitative estimations of IgG, IgM, and IgA showed that, in comparison with the control patients, the false positive reactors had elevated IgM values while sera from their relatives had raised IgG but depressed IgM levels. The results of the survey are thought to suggest the possibility of a genetic background of immunological abnormalities in some patients with chronic false positive tests for reagin and in their families *A. E. Wilkinson*

Narcotic Addiction with False-positive Reaction for Syphilis. [In English.] TUFFANELLI, D. L. (1968). *Acta derm.-venereol. (Stockh.)*, **48**, 542. 2 figs, 11 refs.

It has previously been recognized that narcotic—and particularly heroin—addicts frequently show false positive reactions for syphilis. (Biological false positive (BFP) reactions are defined as those in which reagin is demonstrated by the finding of positive serology for syphilis although treponemal antibody tests give negative results.) Increasing drug addiction in areas where syphilis is also increasing may make this a clinical problem. The present study was made at the University of California School of Medicine, San Francisco, on 54 ex-users of narcotics, the aim being to determine the incidence of BFP reactions once narcotics are discontinued. Syphilitic infection was sought with the VDRL, TPI, and fluorescent treponemal antibody tests; rheumatoid factor was tested for by latex fixation; serum protein patterns were investigated by immuno- and paper electrophoresis; and liver function tests were performed.

The patients, forty of whom were men, had progressed from taking such drugs as marijuana, amphetamine, and methadone to injecting heroin intravenously. Their average age was 27·1 years, the average duration of narcotic usage 9·2 years, and the average period without drugs 16·6 months. Eighteen patients had BFP reactions for syphilis (the average period without drugs in these cases being 13·9 months). There is thus no doubt of the increased incidence of such reactions in ex-addicts, nor of their persistence long after addiction has ceased.

No clinical or serological evidence of immunological abnormality was detected, and there was no clearcut evidence of liver disease as a cause of BFP reactions. The explanations of these reactions therefore remains unknown, but the authors suggest that BFP reactors be examined and questioned to exclude drug addiction. *A. J. Gill*

Serum Reactivity in Specific and Nonspecific Reactors to Blood Tests for Syphilis. [In Jugoslavian.] KRIZNIK, D. (1969). *Zdrav. Vestn.*, **38**, 14. 6 refs.

Influence of Treatment in Biologic False Positive Syphilis Tests in Leprosy. RUGE, H. G. S. (1968). *Int. J. Leprosy*, **36**, 238. 13 refs.

SYPHILIS (Pathology)

Multiple Antigenic Stimulation *in vitro* of Lymphocytes of Patients at Various Stages of Syphilis. (La stimolazione pluriantigenetica *in vitro* die linfociti di sogetti luetici nei vari stadi della malattia.) CHIEREGATO, G., and FALDARINI, G. (1968). *Minerva Derm.*, **43**, 264.

A cryolysate of the Nichols strain of *Treponema pallidum*, cardiolipin antigen, and two preparations of Reiter treponemes were tested for their ability to produce lymphoblastic transformation of lymphocytes at the Dermatological Clinic of the University of Padua. These preparations were incubated with a suspension of lymphocytes in T 199 medium for 4 days at 37°C. and the percentage of transformation into lymphoblasts was determined; values greater than 5 per cent. were considered significant. Fifty patients with syphilis at various stages and twenty with no evidence of syphilis were studied and the results of the transformation experiments compared with those of the TPI and other tests.

Lymphoblastic transformations was seen in only two of ten specimens from patients with primary syphilis but was maximal in the secondary stage in which values of 15–30 per cent. were obtained after exposure to *T. pallidum* lysate of cells from ten patients; the responses to cardiolipin and the Reiter preparation were lower, 15–25 per cent. and 8–20 per cent. respectively.

A similar pattern, but with lower readings, was obtained with cells from twenty patients with latent syphilis. Cells from three of ten patients treated for latent or secondary syphilis, all of whom had negative WR and TPI tests at the time of examination, showed some transformation after exposure to *T. pallidum* lysate but not to the other antigens.

Less than 5 per cent. transformation was found with cells from all the twenty normal patients after exposure to lysed *T. pallidum*.

In general, the intensity of lymphoblastic transformation appeared to follow the behaviour of the TPI test. The authors suggest that the method may prove to be of use in diagnosis and as a test of cure. *A. E. Wilkinson*

Study of Late Ocular Syphilis. Demonstration of Treponemes in Aqueous Humour and Cerebrospinal Fluid. I. Methods of Demonstration of Treponemes. WILKINSON, A. E. (1968). *Trans ophthal. Soc. U.K.*, **88**, 251. 3 figs, 4 refs.

Details are given of the preparation of aqaueous or cerebrospinal fluid and the fluorescein-conjugated antibody. Possible artefacts are illustrated. *J. H. Kelsey*

II. Ocular Findings. RICE, N. S. C., JONES, B. R., and WILKINSON, A. E. (1968). *Trans. ophthal. Soc. U.K.*, **88**, 257. 10 figs, 13 refs.

The patients investigated had variously keratitis, iritis, choroiditis, and angle-closure glaucoma. Nine patients were suspected to have had syphilis and in five of these treponemes were found in the aqueous. *J. H. Kelsey*

III. General and Serological Findings. DUNLOP, E. M. C., KING, A. J., and WILKINSON, A. E. (1968). *Trans. ophthal. Soc. U.K.*, **88**, 275. 1 fig., 22 refs.

The FTA–ABS is the most sensitive test for syphilis, although it is unable to distinguish *Treponema pallidum* from other treponemal infection, *e.g.* yaws. This test may be negative yet treponemes may be found in the aqueous. Animal studies show that steroids depress the level of immunity in latent syphilis and all the patients with aqueous treponemes had had preceding steroids, locally, systemically, or both. *J. H. Kelsey*

A Time-Saving Method of Staining *Treponema pallidum* in the Tissues. (Über eine zeitsparende Methode zur Anfärbung von *Treponema pallidum* in Geweben.) ITO, K., OHTANI, M., and HABA, T. (1969). *Hautarzt*, **20**, 85. 7 figs, 18 refs.

SYPHILIS (Experimental)

Experimental Method of Differentiating between Various Treponematoses: Venereal Syphilis, Endemic Syphilis, and Yaws. (Méthode expérimentale de différenciation entre les diverses tréponématoses: syphilis vénérienne, syphilis endémique et pian.) PARIS-HAMELIN, A., VAISMAN, A., and DUNOYER F. (1968). *Proph. sanit. morale*, **40**, 218. 2 refs.

GONORRHOEA

Gonorrhoea and the Intrauterine Contraceptive Device. STATHAM, R., and MORTON, R. S. (1968). *Brit. med. J.*, **4**, 623. 6 refs.

Seven women with gonorrhoea who were wearing the intrauterine contraceptive device (IUCD) were seen by the authors in the past 18 months at the Department of Venereology, Royal Hospital, Sheffield. Although pelvic infection is rare in women wearing IUCD's, three of these patients had salpingitis, suggesting, though the numbers are small, that the presence of an IUCD increases the severity of gonorrhoea.

The three patients, who were aged 21, 27, and 20 years, had each worn an IUCD for 3 weeks, one year and 5 months respectively, before examination. The IUCD was *in situ* in each case. Diagnosis of gonorrhoea was established by Gram-stained smears from the urethra and endocervix, subsequently confirmed by cultures and sugar fermentation tests.

The first patient developed salpingitis 5 days after seemingly adequate treatment (with aqueous procaine penicillin) for uncomplicated gonorrhoea. Although smears and cultures showed no gonococci, she responded rapidly to rest and aqueous procaine penicillin 1·2 mega units daily for 5 days.

The other two patients had gonococcal salpingitis when seen initially. Response to a 5-day course of penicillin was satisfactory in each case. Both patients, however, had uncomplicated gonorrhoea 10 and 9 days respectively after discharge from hospital. These were thought to be re-infections at the time as further risk of infection had been admitted. They re-attended 9 and 7 months later respectively, with salpingitis, but neither showed gonococci on bacteriological examination. Both showed satisfactory response to a 5-day course of soluble penicillin with streptomycin hydrochloride 0·5 g. twice daily.

The authors speculate on the mechanism of pelvic infection in patients with gonorrhoea wearing IUCDs. They believe that the presence of an IUCD increases the morbidity of gonorrhoea and advise its removal whenever gonococcal infection is found. They also suggest that, where pelvic infection co-exists with an IUCD, gonorrhoea should be considered a likely diagnosis.

It is rightly stressed that the diagnosis of gonorrhoea is a laboratory procedure. *C. S. Ratnatunga*

Treatment of "Penicillin-resistant" Gonorrhea in Military Personnel in S.E. Asia: a Cooperative Evaluation of Tetracycline and of Penicillin plus Probenecid in 1,263 Men. HOLMES, K. K., JOHNSON, D. W., STEWART, S., and KVALE, P. A. (1968). *Milit. Med.*, **133**, 642. 1 fig., 9 refs.

This study, made by four doctors of the U.S. Navy, stems from the finding that in a controlled shipboard evaluation of a single dose of 2·4 million units of procaine benzylpenicillin given to men with gonococcal urethritis there was a 30 per cent. failure rate. Two groups were studied:

(1) 669 men infected by "hostesses" in the Philippines and treated at a local dispensary;

(2) 921 men infected when on leave and treated on board ship.

In each case the diagnosis was by smear and culture, some positive cultures being subjected to sugar fermentation testing.

Two treatment regimens, aimed at securing improved cure rates, were employed. In the first, 2·4 mega units procaine benzylpenicillin in 8 ml. sterile water was injected into the gluteal area, followed by probenecid 1 g. after 1 hr and 500 mg. (by mouth) at 6, 12, and 18 hrs. This regimen was prescribed for the 669 men in Group 1 and 391 men in Group 2. In the second, 1,500 mg. tetracycline was given orally as a single dose,

followed by 500 mg. 6-hourly for 4 days (or in a minority for 3 days). The degree of supervision of oral dosage varied from ship to ship. This regimen was prescribed for 530 men in Group 2. Follow-up examinations were made at 2 and 20 days after treatment.

Of the 1,060 prescribed the first regimen, 417 were followed up for 2 days and 242 for 20 days. Of those treated on board ship (Group 2) 2·3 per cent. failed to respond compared with 8·3 per cent. of the dispensary-treated group (Group 1); the higher failure rate in the latter was believed to be due to undetected re-infection. All the 530 men prescribed the second regimen were followed up for 20 days. The failure rate was 1·9 per cent. and the result was best where oral therapy was most rigidly supervised.

The authors also give details of their studies of the serum levels of penicillin, the incidence of gonorrhoea in "hostesses", and the incidence of postgonococcal nongonococcal urethritis. *R. S. Morton*

Streptomycin in the Treatment of Gonorrhoea in London in 1966. [In English.] SPITZER, R. J., and WILLCOX, R. R. (1968). *Acta derm.-venereol. (Stockh.)*, **48,** 537. 27 refs.

Streptomycin, when introduced in about 1947, cured 97 per cent. of patients with gonorrhoea in a single injection of 0·2–0·5 g., and it became the drug of choice for patients allergic to penicillin. Moreover, its weak treponemicidal action did not affect darkfield tests for possible concomitant syphilis, and so in France it became the drug for routine use. Since 1951 evidence has come from all parts of Europe and the USA of increasing numbers of strains resistant to streptomycin, and therefore of increasing failure rates. The present study, carried out at St. Mary's Hospital, London, in 1966, was made to assess treatment results in acute male gonorrhoea when single injections of 1·0 g. streptomycin sulphate were given and to compare the results with those achieved previously at 5-year intervals back to 1951.

Of 130 males treated in 1966, 104 were followed up: the failure rate was 31·7 per cent. compared with 14·9 per cent. for 1961, 10·2 per cent. for 1956, and 8·5 per cent. for 1951. The failure rate in 1966 for 200 patients given a single injection of 1·2 mega units procaine penicillin was 8·5 per cent. Thus there has been a constant increase in the streptomycin failure rate over the past 15 years It is logical to suppose that this trend will continue, so that by 1971, in London, streptomycin would probably have a cure rate of only 14·2 per cent in male gonorrhoea.

A. J. Gill

The Gonorrhoea Problem. [In Norwegian.] SVINDLAND, B. (1968). *T. norske Laegeforen.*, **88,** 2252. 27 refs.

Penicillin-Resistant Gonorrhoea. BLUMBERG, N. (1969). *J. Urol. (Baltimore)*, **101,** 106.

Microbiological Diagnosis of *Neisseria gonorrhoeae*. Technique of Isolation and Identification. (Diagnosi microbiologica di *Neisseria gonorrhoeae*. Tecniche di isolamento e identificazione.) CAPRILLI, F., and ORTALI, A. V. (1968). *G. ital. Derm.*, **109,** 181. 10 refs.

Treatments of Acute Gonococcal Urethritis in the Male with a Single Dose of Erythromycin Stearate. (Tratamiento de las uretritis agudas gonocócicas masculinas con dosis única de estearato de eritromicina.) MARTINI, J., HALABI, J., and BORGONO, J. M. (1968). *Rev. méd. Chile*, **96,** 525. 6 refs.

Toxic Constituents of *Neisseria gonorrhoeae*. PEACOCK, W. L., and SCHMALE, J. D. (1969). *Nature (Lond.)*, **221,** 760. 1 fig., 11 refs.

NON-GONOCCAL URETHRITIS AND ALLIED CONDITIONS

Urogenital Infection by *Haemophilus vaginalis*. [In Russian.] TEOKHAROV, S. A. (1967). *Vestn. Derm. Vener.*, **41,** No. 10, p. 63. 1 fig., 32 refs.

Specimens of vaginal discharge from 304 women and of urethral discharge or scrapings from the distal part of the urethra from 129 men were examined by Gram-stained smear and by culture for the presence of *H. vaginalis*. The microscopial appearances ("myriads" of Gram-negative short pleomorphic bacilli lying outside the epithelial cells and covering their surface—"clue-cells") are so characteristic that, unlike other investigators, the author believes that the diagnosis of the infection need not be verified by culture. Out of 66 women (21·7 per cent. of the total) and twelve men (9·3 per cent.) in whom evidence of *H. vaginalis* infection was detected by smear, it was confirmed by growth of the organisms in culture in only seventeen women. The incidence of the infection was more than twice as high in sixty women suffering from trichomoniasis (38·3 per cent.) than in the remaining 244 women (17·6 per cent.). Eight of the twelve men with positive smears were husbands of women in whose vaginal smear *H. vaginalis* was detected.

On the strength of these results it is suggested that *H. vaginalis* may be transmitted sexually, that in women it is frequently associated with trichomoniasis, and that men are carriers of the infection. Treatment, which should be given to both sexual partners, consists in women of a 10 days' course of insufflation of the vagina and vulva with a dusting powder containing oxy- or chlortetracycline 200 mg., boric acid 300 mg., and glucose 500 mg., and in men of irrigation of the urethra with a solution of oxycyanide of mercury (1:8000) or of nitrofurazone (1:5000) once a day. These procedures were effective in all the 37 women and 26 men to whom they were applied. Relapses occurred in four women whose sexual partners had not been treated.

L. Z. Oller

Genital Infection with TRIC Agents in Taiwan. CHIANG, W. T., ALEXANDER, E. R., WEI, P. Y., and FRESH, J. W. (1968). *Amer. J. Obstet. Gynec.*, **100**, 422. 4 figs, 31 refs.

American and Chinese workers in Formosa report here the isolation of genital strains of TRIC agents *(Chlamydiae)*. The agent was grown in yolk sac culture from cervical swabs taken from the following women: two attending antenatal clinics (119 tested), one attending a family planning clinic (29 tested), and two prostitutes (59 tested). From one of the pregnant women an agent was isolated on three occasions before delivery, and from a swab taken during the second stage of labour. Her baby developed inclusion conjunctivitis, starting on the day after delivery, and TRIC agent was recovered from the conjunctiva on the eighth day. No isolates were obtained from men and women diagnosed as suffering from non-specific urethritis; however, most of these were chronic cases who had already received antibiotic therapy. No eye disease was observed in any of the patients from whom genital isolates were obtained. The differences between these isolates and the trachoma agents previously recovered in Taiwan are described.

M. J. Hare

Effect of Some Antibiotics on the Growth of Trachoma-agent as observed by Electron Microscopy. MATSUBARA, M., and MITSUI, Y. (1968). *Jap. J. Ophthal.*, **12**, No. 2, p. 60. 6 figs, 15 refs.

The morphological changes of the TRIC-agent by administration of oxytetracycline and penicillin were studied in the yolk sac and cell culture by electron microscopy. Both antibiotics affected developmental forms of the TRIC-agent but not mature particles. The synthesis of ribosome-like granules was inhibited by oxytetracycline in the developmental forms and a ghost shadow of the agent resulted by contact with this antibiotic. The synthesis of the cell wall was inhibited by penicillin and the fission of the particles was retarded, as a result of which extremely huge particles were formed. These effects of antibiotics were similar to those against bacteria and not to those against true viruses.

(Authors' summary)

Latency in Human Infections with TRIC Agents. HANNA, L., DAWSON, C. P., BRIONES, O., THYGESON, P., and JAWETZ, E. (1968). *J. Immunol.*, **101**, 43. 3 figs, 15 refs.

The presence of TRIC agents can be detected in human conjunctival cell specimens by direct immunofluorescent staining in 60·3 per cent. of active TRIC infections, 27·2 per cent. inactive TRIC infections, 5·9 per cent. of TRIC contact individuals, 18·2 per cent. of possible TRIC infections, and 5·7 per cent. of non-TRIC individuals. It is stressed that direct immunofluorescence is the most sensitive method for TRIC agent detection. The authors also emphasise that TRIC agents may be found in eyes that exhibit no clinical activity of trachoma or inclusion conjunctivitis.

J. L. Baum

Comparative Isolations of TRIC Agent in the Yolk Sacs and the Amniotic Cavities of Chick Embryos. [In English.] HARISIJADES, S. S., and HARISIJADES, B. S. (1967). *Acta med. iugosl.*, **21**, 223. 1 fig., 4 refs.

The Arthus Reaction to *Candida albicans* in Asthma Patients. [In English.] EL-HEFNY, A. M. (1968). *Acta allerg. (Kbh.)*, **23**, 303. 13 refs.

Serum Antibody Titres to *Candida albicans* utilizing an Immunofluorescent Technic. ESTERLY, N. B. (1968). *Amer. J. clin. Path.*, **50**, 291, 4 figs, 17 refs.

Clinical Bacteriology of the *Mimeae*. COOPER, R. G. (1968). *S. Aust. Clin.*, **3**, 143, 74 refs.

Chronic Mucocutaneous Candidiasis—associated Immunologic Abnormalities. LANDAU, J. W. (1968). *Pediatrics*, **42**, 227. 23 refs.

Candidiasis: Studies Pertaining to its Association with Endocrinopathies and Pernicious Anemia. BLIZZARD, R. M., and GIBBS, J. H. (1968). *Pediatrics*, **42**, 231. 1 fig., 25 refs.

Human Serum Interactions with *Candida albicans*. CHILGREN, R. A., HONG, R., and QUIE, P. G. (1968). *J. Immunol.*, **101**, 128.

REITER'S DISEASE AND ALLIED CONDITIONS

Clinical Studies on Gonococcal Arthritis and Reiter's Syndrome and Measurement of Gonococcal and Bedsonia Antibodies. SHARP, J. T., LIDSKY, M. D., and RILEY, W. A. (1968). *Arthr. and Rheum.*, **11**, 569. 2 figs, 36 refs.

The reason for the association between genitourinary infection and arthritis is not entirely clear. In this paper from Baylor University College of Medicine, the Ben Taub General Hospital, and Houston Veterans Administration Hospital, the authors review the records of 94 patients in whom gonococcal infection, Reiter's syndrome, or an association of arthritis with a genitourinary infection was suspected. Cultures of joint fluid, urinary tract exudate, skin lesions, and blood had been performed in most cases before treatment was started. Gonococcal and bedsonia antibodies were measured in sera from some of these patients and also from several groups of control patients not included in the clinical analysis.

Of these patients 28 had arthritis due to organisms of the *Neisseria* group—*N. gonorrhoeae* in nineteen cases —as indicated by culture of joint fluid, blood, or metastatic skin lesions. A further seven patients had the full Reiter's syndrome, and one of these also had iritis.

A final diagnosis was not established in the remaining

59 cases. The patients concerned were subdivided into four categories:

14 with arthritis and skin lesions characteristic of gonococcaemia;

15 with arthritis and urethritis;

four with arthritis and gonococci in the genito-urinary tract;

26 who had acute arthritis but who lacked all of the above additional characteristics.

In the last group neither the clinical features nor the results of tests for gonococcal or bedsonia antibodies were sufficient to establish a diagnosis. *Bedsonia* antibodies occurred frequently in all groups except controls with rheumatoid arthritis, although only one of the seven patients with Reiter's syndrome showed these antibodies.

The authors feel that present methods do not allow the certain diagnosis of gonococcal arthritis unless the gonococcus can be cultured from the joint fluid or tissue, the blood, or a metastatic skin lesion. The role of bedsonia in Reiter's syndrome remains uncertain.

J. S. Cohen

Sero-negative Polyarthritis. The *Bedsonia* (*Chlamydia*) Group of Agents and Reiter's Disease. A Progress Report. DUNLOP, E. M. C., HARPER, I. A., and JONES, B. R. (1968). *Ann. rheum. Dis.*, **27**, 234. 1 fig., 30 refs.

ANTIBIOTICS AND CHEMOTHERAPY

Transfer of Cephaloridine from Mother to Fetus. ARTHUR, L. J. H., and BURLAND, W. L. (1969). *Arch. Dis. Childh.*, **44**, 82.

PUBLIC HEALTH AND SOCIAL ASPECTS

Britain's Venereal Disease Education for High-Risk, Age, and Cultural Groups. DALZELL-WARD, A. J. (1969). *Med. Offr*, **121**, 3. 8 refs.

Incidence of Gonococcal Ophthalmia, Syphilis, and Gonorrhoea since the Inception of the Glasgow Schemes of Prevention and Treatment. WILSON, T. S. (1969). *Med. Offr*, **121**, 27. 11 figs, 6 refs.

Attitudes towards Venereal Disease. PORTER, W. L. (1968). *Delaware med. J.*, **40**, 373.

Use of the Venereal Disease Clinic of San Mateo County, California. WHITE, D. L., NAY, P. D., and BLACKFORD, L. S. (1968). *Publ. Hlth Rep. (Wash.)*, **83**, 954. 3 refs.

Study of Socio-Morbid Pattern at the VD Out-Patient Department of a Teaching Hospital in the Summer and Winter Seasons. GUPTA, R. N., JAIN, V. C., and CHANDRA, R. (1968). *Indian J. Derm. Venereol.*, **34**, 237.

MISCELLANEOUS

Natural History of Peyronie's Disease. WILLIAMS, J. L., and THOMAS, G. G. (1968). *Proc. roy. Soc. Med.*, **61** 876. 1 fig., 3 refs.

A study of the natural history of Peyronie's disease in a series of 21 patients seen since 1952 is reported from the Department of Urology, The United Sheffield Hospitals.

Twelve patients were given no treatment at all and nine had radiotherapy. Since no improvement occurred in any of the patients so treated within a year of completion of therapy, the authors felt that radiotherapy did not materially influence the condition. Hence, they considered all 21 patients together in their review.

Age distribution was between 26 and 65 years (peak 50–59). Dupuytren's contracture was found in ten of seventeen patients examined for it, an incidence higher than that generally recorded.

Curvature of the erect penis and painful intercourse were the commonest presenting symptoms, and twelve patients had noticed a lump. Most patients presented within 2 to 12 months of onset, and a lump was felt in the shaft of the penis in all cases.

Complete resolution occurred in six patients and improvement in ten; in five the condition remained unchanged. Since the average period of resolution was 4 years, complete resolution could yet occur in some.

The authors believe that when first seen the condition appears to be fully manifested. It does not become worse and gradual resolution takes place over many months. Pain disappears first and then plaques, and later straightening of the penis occurs.

Details recorded in previous papers in the literature were inadequate for assessment of the effectiveness of treatment described, and a plea is made that authors give exact details of the time taken for response to treatment in future reports. *C. S. Ratnatunga*

Behçet's Syndrome associated with the Superior Vena Cava Syndrome (Case Report). [In Japanese with English Summary.] YOSHIOKA, H., ENDO, Y., SUGITA, T., and NAGASAKI, Y. (1968). *Rinsho Ganka*, **22**, 751. 4 figs, 27 refs.

A 33-year-old man, in whom manifold clinical signs of Behçet's syndrome (recurrent aphthous stomatitis, erythematous nodules of the skin, and iritis) had been present for about 7 years, developed facial œdema and cyanosis 4 years later. Angiographic studies demonstrated complete obliteration of the bilateral brachiocephalic veins at their junction to the superior vena cava and led to the diagnosis of the vena cava syndrome.

Because of the frequent association of vaso-obliterative diseases and the syndrome of Behçet, the case is interpreted as belonging to the so-called angio-Behçet syndrome.

It is emphasised that Behçet's syndrome must be considered in the superior vena cava syndrome of

unidentified ætiology in younger patients and that careful differential diagnosis is necessary between the moon face due to systemic steroid administration and the facial œdema from the superior vena syndrome in its early stage during treatment of Behçet's syndrome.

R. Asayama

Involvement of the Central Nervous System in Behçet's Disease. (Über die Beteiligung des zentralnervensystems bie der Behçetschen Krankheit.) HERRSCHAFT, H. (1968). *Dtsch. med. Wschr.*, **93**, 1103. 50 refs.

A report of a typical case of Behçet's disease with a dicussion of the literature. *W. D. Schafer*

Pathology of Adie's Syndrome. HARRIMAN, D. G. F., and GARLAND, H. (1968). *Brain*, **91**, 401. 11 figs, 47 refs.

Spontaneous Fecal Contamination of Cerebrospinal Fluid: An Unusual Complication of Lymphogranuloma Venereum. LOZADA, E., GUTSTEIN, S., BERNSTEIN, L. H., KAHN, I. J., and ABAD, A. A. (1969). *Amer. J. dig. Dis.*, **14**, 30. 3 figs, 3 refs.

Metacycline in the Treatment of Granuloma Inguinale. [In Portuguese.] MALHEIROS SANTOS, J., DIAS CEOLHO, W., GENEROSO COELHO, N., and DE ABREU JUNQUEIRA, M. (1968). *Hospital (Rio de J.)*, **74**, 271. 4 figs, 4 refs.

Congenital Anomalies of the Urethra. MOGG, R. A. (1968). *Brit. J. Urol.*, **40**, 638. 18 figs, 13 refs.

Injuries to the Urethra. MITCHELL, J. P. (1968). *Brit J. Urol.*, **40**, 649. 29 figs, 96 refs.

Traumatic Stricture of the Urethra. BADENOCH, A. W. (1968). *Brit. J. Urol.*, **40**, 671. 7 figs, 7 refs.

Urethral Strictures in Relation to the Sphincters. TURNER-WARWICK, R. T. (1968). *Brit. J. Urol.*, **40**, 677. 6 figs, 10 refs.

Primary Carcinoma of the Urethra. POINTON, R. C. S., and POOLE-WILSON, D. S. (1968). *Brit. J. Urol.*, **40**, 682. 6 figs, 11 refs.

Pseudo-Stricture of the Urethra. WALSH, A. (1968). *Brit. J. Urol.*, **40**, 710.

A Method of Urethroplasty for Urethral Strictures. WILLIAMS, J. L., and CRAWFORD, B. S. (1968). *Brit. J. Urol.*, **40**, 712. 8 figs, 12 refs.

One-Stage Urethroplasty. ORANDI, A. (1968). *Brit. J. Urol.*, **40**, 717. 9 figs.

Prostatic Abscess: A Report of 25 Cases. DAJANI, A. M., and O'FLYNN, J. D. (1968). *Brit. J. Urol.*, **40**, 736. 9 refs.

Diagnosis and Treatment of Vaginitis. HARTGILL, J. C. (1969). *Practitioner*, **202**, 363. 5 refs.